BY ORDER OF THE COMMANDER
43D AIRLIFT WING

POPE AFB INSTRUCTION 21-127

12 JUNE 2003

Maintenance

IN PROCESS INSPECTIONS

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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OPR: 43 MXG/QA (MSgt Green)
Supersedes PAFBI 21-127, 17 March 1999

Certified by: 43 MXG/QA (Capt Casquejo)
Pages: 19
Distribution: F

This instruction establishes individual responsibilities, restrictions, and documentation requirements for In-Process Inspection (IPI) actions. Squadron commanders and maintenance officers are responsible for ensuring compliance with the contents of this instruction. QA will monitor the IPI program and assist the squadrons as necessary. The IPI instruction should be reviewed at least annually. Records Disposition: Maintain and dispose of records created as a result of processes prescribed by this instruction IAW AFMAN 37-139, Records Disposition Schedule.

SUMMARY OF REVISIONS

This document is substantially revised and must be completely reviewed.

1. Introduction.

1.1. The attached are those actions requiring an IPI deemed necessary by senior level supervision.

1.2. An IPI is performed during the assembly or installation of systems, subsystems, or components at critical stages of work and is defined as that stage at which continuation would prevent determining the quality of the maintenance being performed. The term “Quality” as used is two fold: (1) compliance with the requirements of a specific technical order task, and (2) an evaluation of the workmanship that has been performed.

1.3. This IPI listing has been compiled and developed with coordination from all work centers.

1.4. All maintenance personnel are responsible for complying with the requirements of this IPI listing.

1.5. IPI approval authority for all squadrons is AFI 21-101, *Aerospace Equipment Maintenance Management.*

1.6. This IPI list supersedes the previous listing and all other prior listings. Changes in this IPI listing have been updated by QA. If there are any questions, contact 43 MXG/QA, at 4-6452.

2. Procedures.

2.1. An IPI is performed during the assembly or installation of systems, sub-systems, or components at critical points during the task procedure and is defined as the point where continuation of the task would prevent determination of the quality of maintenance being performed.

2.2. The maintenance supervisor will compile a list of all tasks requiring IPI, in coordination with the squadron commander, and submit it to the group commander for approval.

2.3. Individuals must be on the special certification roster (SCR) in order to sign off an IPI.

2.4. Specific cross utilization training task qualification will be documented in personnel training records when individuals are authorized to perform IPIs outside their primary Air Force Specialty Code (AFSC). **EXCEPTION:** This task qualification documentation is waived for personnel selected as authorized to clear all systems IPIs due to their aircraft maintenance experience and the trust vested in them by the group commander.

3. Documentation.

3.1. IPIs will be separate entries in AFTO Forms and entered as a red X. IPIs will be documented in a separate block from the original discrepancy in the AFTO Form 781A stating the purpose of the IPI and will reference the original discrepancy.

3.2. Document IPI compliance in the "Corrective Action" block of the AFTO Form 781A, **Maintenance Discrepancy and Work Document** and sign the "Inspected By" block. Ensure the original discrepancy references the page and item numbers of the IPI entries. Red X will be signed off IAW T.O. 00-20-5/AMCI, page 8, para 3-11.4.19.

3.3. IPIs for off-equipment maintenance will be documented in the same manner as on-equipment IPIs, utilizing the AFTO Form 350, **Repairable Item Processing Tag**.

3.4. IPIs must be cleared by a qualified officer, 7- or 9-skill level technician, or civilian equivalent on red X orders.

3.5. Off-equipment engine IPIs may be documented in an engine work folder rather than in an automated system.

4. Off-Base Location Documentation.

4.1. When an IPI certified individual is not available at a deployed location, the flight engineer, crew chief, dispatched qualified maintenance technician, or aircraft commander may clear IPIs when specific authorization is granted by the home station Maintenance Group Commander.

WINFIELD W. SCOTT III, Brigadier General, USAF
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 21-101, *Aerospace Equipment Maintenance Management*

AFI 21-101, AMCSUP1, *Aerospace Equipment Maintenance Management*

AFOSH 91-45, *Hazardous Energy Control and Mishap Prevention Signs and Tags*

T.O. 1C-130H-2-32JG-10-1, *Landing Gear System Main Gear and Doors*

T.O. 1C-130 H-2-32JG-20-1, *Landing Gear System Nose Gear*

T.O. 1C-130H-2-32JG-50-1, *Landing Gear System Nose Gear Steering*

T.O. 1C-130H-2-32 JG-40-1, *Landing Gear System Brakes and Anti-Skid*

T.O. 1C-130H-2-79JG-00-1, *Power Plant Engine Oil*

T.O. 1C-130H-2-71JG-00-2, *Power Plant General Maintenance*

T.O. 1C-130H-2-73JG-00-1, *Power Plant Engine Fuel*

T.O. 1C-130H-2-61JG-10-1, *Propeller Assembly*

T.O. 1C-130H-2-61JG- 20-1, *Propeller – Propeller Control*

T.O. 1C-130H-2-21JG-30-1, *Air Conditioning Pressurization System*

T.O. 1C-130H-2-24JG-20-1-1, *Electrical System AC Power*

T.O. 1C-130H-2-29JG-00-1-1, *Hydraulic System*

T.O. 1C-130H-2-28JG-00-1, *Fuel System, General Maintenance*

T.O. 1C-130H-2-28JG-10-1, *Fuel System Storage*

T.O. 1C-130H-2-22JG-10-1-1, *Auto Flight Control System – Autopilot*

T.O. 1C-130H-2-23JG-40-1, *Communication System AN/AIC-18A/25 Intercommunication*

T.O.1C-130H-2-27JG-30-2, *Flight Controls Elevator Trim System*

T.O. 1C-130H-2-25JG-00-1, *Equipment and Furnishings*

T.O. 1C-130H-2-12JG-20-1, *Ground Handling Lubrication*

T.O. 1C-130A-2-1CL-2, *Twenty-Man Life Raft*

T.O. 45S3-26-3, *Nose Landing Gear Steering Valve Assembly*

T.O. 9H2-3-12-3, *Nose Landing Gear Steering Cylinder Assembly*

T.O. 9H2-4-102-3, *Tandem Aileron Cylinder Assembly*

T.O. 9H2-4-94-3, *Dual Rudder Booster Actuator*

T.O. 2J-T56-56, *Turboprop Engine, Models T56-A-7B, -15*

T.O. 1C-130B-10, *Build-Up Instructions – Aircraft Power Package*

T.O. 3H1-18-2, *Variable Pitch Aircraft Propeller, Model 54H60-91/PL21403*

T.O. 35D-3-8-3-1, *Main and Nose Gear Dolly*

T.O. 35D3-2-25-1, *Truck, Lift, Aerial Stores, 3,000 Pound Capacity, Type MJ-1A*

T.O. 35C2-3-469-2, *Generator Set Diesel Engine Driven*

T.O. 35C2-3-469-12, *Generator Set Diesel Engine Driven*

T.O. 11P10-6-7, *PCU-63 (V)/P – Universal Water Activated Release System*

T.O. 14S-1-102, *USAF Floatation Equipment*

T.O. 14D3-11-1, *Emergency Personnel Recovery Parachute (Chest, Back, Seat Style)*

T.O. 11P-1-7, *Cartridges for Aircrew Escape Systems*

T.O. 14D1-2-468-2, *Parachute, Ram Air, Free Fall, Personnel*

T.M. 09770A-12& P/1A, *Ram Air Parachute Assembly*

T.O. 14D1-2-396, *Personnel Parachute, Types A/28S-17, -18*

T.O. 14D3-10-1, *Ejection Seat Aircrew Recovery Parachute*

T.O. 00-25-241, *Parachute Logs and Records*

T.O. 14D1-3-316, *Drogue Parachute Assembly*

T.O. 1C-141B-2-70JG-00-1, *Power Plant Limits and Operating Checklist*

T.O. 1C-141B-2-70JG-00-2, *Power Plant General Maintenance*

T.O. 1C-141B-2-73JG-00-1, *Power Plant Fuel System*

T.O. 1C-141B-2-75JG-00-1, *Power Plant Air System*

T.O. 1C-141B-2-21JG-00-1, *Air Conditioning General Maintenance*

T.O. 1C-141B-2-51JG-00-1, *Structures*

T.O. 1C-5A-2-2, *Airframe*

T.O. 1C-5A-2-9, *Flight Controls*

T.O. 1C-5A-2-13, *Environmental Control and Oxygen Systems*

Abbreviation and Acronyms

AFB – Air Force Base

AFSC – Air Force Specialty Code

AFTO – Air Force Technical Order

AMCI – Air Mobility Command Instruction

FO – Foreign Object

IAW – In Accordance With

IPI - In-Process Inspection

IWLES – Inboard Wing Leading Edge Station

MLG – Main Landing Gear

MOS – Maintenance Operations Squadron

MXGQA – Maintenance Group Quality Assurance

NLG - Nose Landing Gear

OWLES – Outboard Wing Leading Edge Station

PLR – Pitch Lock Regulator

QA – Quality Assurance

SCR – Special Certification Roster

SWP – Supplemental Work Package

T.O. – Technical Order

T.M. – Technical Manual

USAF – United States Air Force

WP – Work Package

WUC – Work Unit Code

Attachment 2

IPI LISTING

C-130 ON-EQUIPMENT		
WUC	**Nomenclature**	**Specific Task**
LANDING GEAR		
1311S	MLG Trunnion Bushing	Inspect for proper installation, beveled surface down. (ref: T.O. 1C-130H-2-32JG-10-1, 32-11-08, page 2-156, step a-3)
13222	NLG Strut	Ensure backup rings are properly installed on seals; ensure lower centering cam anti-rotation keys are installed and staked on cam; ensure top centering cam pins are installed; ensure upper bearing retaining pins are installed and secured with new cotter pins. (ref: T.O. 1C-130 H-2-32JG-20-1, 32-21-03, page 2-38, steps 3a-8)
1321Q	NLG Steering Collar Keys	Ensure keys are installed prior to raising upper gland nut. (ref: T.O. 1C-130H-2-32JG-50-1, 32-51-07, page 2-48, step d)
13521	Nose Steering Actuator	On installation of steering actuator, prior to raising the steering collar mounting bracket into position, ensure steering actuator bushings are properly installed and both locking keys are in position. (ref: T.O. 1C-130H-2-32JG-50-1, 32-51-04, page 2-28, **CAUTION** prior to step 3b)
13521	Steering Actuator Roll Pin	Ensure roll pins are installed on top of actuator trunnion. (ref: T.O. 1C-130H-2-32JG-50-1, 32-51-04, page 2-28, step 2)
13711	Main Wheel Assembly	Prior to installation, inspect axle, axle journals and axle spacer for cracks, corrosion pitting, scoring, wear, and distortion before surfaces are lubed (ref: T.O. 1C-130H-2-32 JG-40-1, page 2-44) check for proper installation of the spacer and the inboard wheel bearing. (P/N 52400), (ref: T.O. 1C-130H-2-32JG-40-1, 32-41-04 page 2-46, step 1, 2, and 4)
13712	Nose Wheel Assembly	Prior to installing nose wheel assembly, inspect axle collar for cracks, pitting, corrosion, scoring, wear, and distortion before surfaces are lubed. (ref: T.O. 1C-130H-2-32JG-20-1, page 2-58)

ENGINES/PROPS		
1154P	Mount Bolt, Upper	Insure proper torque of upper mount bolts. (ref: T.O. 1C-130H-2-71JG-00-2, 1-3-11, page 1-102.2, NOTE, 4a through 4d, and CAUTION)
1154Q	Mount Bolt, Lower	Insure proper torque of lower mount bolts. (ref: T.O. 1C-130H-2-71JG-00-2, 1-3-11, page 1-102.2, NOTE, 4a through 4d, and CAUTION)

2213A	External Scavenge Pump Assembly	Prior to installation, ensure 2 each packing seals are installed on pump. (ref: T.O. 1C-130H-2-79JG-00-1, 79-20-13, page 3-40, step a)
22452	Turbine Rear Bearing	Inspect installation of turbine rear bearing. (ref: T.O. 1C-130H-2-71JG-00-2, 71-90-21 page 8-98, step 7a and 7c)
22450	Turbine Rear Bearing Support	Prior to installation of rear bearing cage, ensure small metal o-ring is installed on bearing support flange rear face. Prior to installation of rear bearing oil seal ensure installation of large gasket on oil seal rear face and small metal o-ring on front face of bearing support flange. (ref: T.O. 1C-130H-2-71JG-00-2, 71-90-21, page 8-92, **CAUTION** 1b and 2b, c, d)
22460	Turbine Rear Scavenge Pump	Prior to pump installation, ensure the gasket is installed. (ref: T.O. 1C-130H-2-71JG-00-2, 71-90-21, page 8-116, step 1b)
22511	Fuel Pump	Prior to installation, ensure the packings are installed on drive shaft and the gasket is installed on the accessory drive pad. (ref: T.O. 1C-130H-2-73JG-00-1, 73-10-14, page 2-38, step 4 and 5b)
22514	High Pressure Fuel Filter	Ensure installation of 4 each packings on high-pressure fuel filter. (ref: T.O. 1C-130H-2-73JG-00-1, 73-10-10, page 2-10, step 3)
2251E	Fuel Control	Prior to installation, ensure the hollow pin is intact and 1 each packing is installed over pin. Ensure packing is installed over fuel control mounting flange. (ref: T.O. 1C-130H-2-73JG-00-1, page 3-56, step 6 and 7)
22BAL	Torquemeter Shaft Seal	After installation, inspect for F.O. in and around seal area. Ensure shaft seal tongs located at bottom of seal are engaged and seal fits securely around the torquemeter housing. Maximum gap between torquemeter housing and shaft seal is .060 inches. (ref: T.O. 1C-130H-2-71JG-00-2, 71-60-10, page 5-8, para d)
22700	Torquemeter Assembly	Prior to mating power section, ensure the front bearing area is free of F.O. and the oil jet is not damaged. Ensure packing is installed on the torquemeter shaft and on the torquemeter housing prior to mating torquemeter to power section. (ref: T.O. 1C-130H-2-71JG-00-2, 71-90-20, page 8-66, step 1)
22711	Torquemeter Housing Assembly	Prior to installation of torquemeter housing, ensure packing is installed on front of torquemeter housing front and rear pilot diameter. (ref: T.O. 2J-T56 WP 01300, page 8, para 3-5, step a)
32500	Propeller Installation on Engine	Prior to rear cone installation, ensure gearbox shaft thrust nut lock ring is properly splined and seated. Ensure the corrosion inspection and treatment of the propeller shaft has been accomplished. (ref: T.O. 1C-130H-2-61JG-10-1, 61-10-11, page 2-42, steps 6 and 7)

32512	Pitch Lock Regulator and Dome Installation	Prior to installation of dome assembly ensure the snap ring is installed in pitch lock regulator's externally threaded ring. Ensure all blades are rotated to the feather position. Ensure dome is in the feather position with the feather latches locked. Ensure proper shim thickness on the barrel shelf. **CAUTION:** Do not rotate #1 blade past 100 degrees or –10 degrees. (ref: T.O. 1C-130H-2-61JG-10-1, 61-10-11, page 2-52, **CAUTION** and steps 1-3.1, page 2-54, **NOTE** and step 4)
32516	Propeller Retaining Nut	Ensure propeller retaining nut is torqued properly (1900-2200 foot pounds). (ref: T.O. 1C-130H-2-61JG-10-1, 61-10-11, page 2-46, step 13d)
32525	Valve Housing Installation	Ensure the beta back-up valve control cam of the replacement valve housing is set. Ensure the removal of the rig pin and meshing of drive gear train. (ref: T.O. 1C-130H-2-61JG- 20-1, 61-20-02, page 1-48 **NOTE** 61-20-02, page 1-50, step 4a-4c)
32560	Pitch Lock Regulator (PLR) Installation	Prior to installing PLR cam lock ring, ensure pitch lock ratchet ring's pin is aligned with the centerline of the #2 blade bore. (ref: T.O. 1C-130H-2-61JG-10-1, 61-10-11, page 2-50, **NOTE** and 3b)
32565	Valve Housing Assembly Cover Installation	Prior to installation of cover, rotate control input lever to reverse position, rotate adjusting screw as required to align the teeth on the two input spur gears. Once installed, adjust back- lash adjusting screw as required to allow a small amount of pressure between the input spur gears and alpha shaft drive gear. (ref: T.O. 1C-130H-2-61JG-20-1, 61-20-02, page 1-54, steps 5a and b, page 1-56, step 7c)
41311	Pressure Controller	Inspect for proper connection of hoses to controller. (ref: T.O. 1C-130H-2-21JG-30-1, 21-30-05, page 1-78, step 1-5-1, **NOTE**)
42210	Engine Driven Generator	Prior to installation of generator, ensure stub shaft is lubricated. Inspect garlock seals for leaks. If it is a modified generator, ensure installation of snap ring on quick disconnect. (ref: T.O. 1C-130H-2-24JG-20-1, page 4-30, 4-1-5, step a, page 4-16, 4-1-2, step 10, page 4-26, 4-1-5, step 3a)
453AE	Engine Driven Hydraulic Pump	Prior to installation, check splines on pump and reduction gearbox for wear and apply lubrication on pump splines. (ref: T.O. 1C-130H-2-29JG-00-1-1, 29-13-10, page 5-8, step 6)
FUEL SYSTEM MAINTENANCE		

46110 46120 46130	Tank, Internal Main Cell, Bladder Tank, External	Prior to closure or foam baffle installation, ensure all foreign objects are removed, all accessible wiring and plumbing is connected. Check the vent system for security, vent float valves for freedom of operation and vent outlets, including outside tank vent, for obstructions. (ref: T.O. 1C-130H-2-28JG-00-1, page 2-40.1, para 2-3-1, step 1)
46120	Cell, Cavity	Prior to installation, inspect cavity for any F.O., seams, and sharp edges that may cause damage during installation. (ref: T.O. 1C-130H-2-28JG-10-1, page 1-14, para 1)
46110	Tank, Integral Main	Prior to application of "A" Coat sealant, inspect the sealant repair area to ensure all debris and foreign material has been removed from the tank and repair area has been properly cleaned. (ref: T.O. 1-1-3, page 6, para 6-8.3.3a (3)).
46110	Tank. Integral Main	Inspect sealant 30 minutes after application of "A" Coat. Ensure sealant is worked into and around crevices, holes, seams, fasteners, and on surface to be sealed. Ensure surface is tack-free before application of final seal. (ref: T.O. 1-1-3, page 6-11, para 6-8.3.3c. (1)).
46110	Tank, Integral Main	Inspect sealant 30 minutes after application of "B" Coat for proper coverage and there are no air bubbles, pockets, or voids. (ref: T.O. 1-1-3, page 6-11, para 6-8.3.3c (2) (h)).
COMM/NAV		
5211C	Auto-Pilot Release Switch, Pilot's and Copilot's Control	Check for accuracy of connection. (ref: T.O. 1C-130H-2-22JG-10-1-1, section 22-11-19, page 4-104, **NOTE**)
64216	AN/A1C-18A Intercommunication System Control Wheel Mic Switch	Check for accuracy of wiring connection. (ref: T.O. 1C-130H-2-23JG-40-1, 23-40-11, page 2-20 under **NOTE**)
6441F	AN/A1C-25 Intercommunication System Control Wheel Mic Switch	Check for accuracy of wiring connection. (ref: T.O. 1C-130H-2-23JG-40-1, 23-40-11, page 2-24, under **NOTE**)
14244	Pilot and Copilot Control Wheel Switch Controls	Prior to installation of switch in housing, check positioning of switch and proper clearance of solder post and housing. Check for accuracy of wiring. (ref: T.O.1C-130H-2-27JG-30-2, 27-30-70, page 3-12 **NOTE**)

LIFE SUPPORT EQUIPMENT		
91213	Life Raft Installation	**1.** Prior to installation of life raft, ensure raft and compartment door release cables (flap well only) are serviceable and properly lubricated. (For serviceable use ref: T.O. 1C-130H-2-25JG-00-1, section 25-61-01. For lubrication use ref: T.O. 1C-130H-2-12JG-20-1, page 1-72)
		2. Prior to life raft installation, ensure the anti-chaffing material is installed in the compartment bottom and each end of the CO2 cylinder tray. (ref: T.O. 1C-130A-2-1CL-2, step 3a, page 1-8, 1-9 under **CAUTION**)
		3. Prior to closing the life raft door, ensure the following items were properly completed:
		3.1. Life raft retainer line is tied to CO2 cylinder cradle. (ref: T.O. 1C-130H-2- 25JG-00-1, step 5k, page 4-48.
		3.2. Life raft retainer straps are properly installed. (ref: T.O. 1C-130H-2-25JG-00-1, Step 5e to j, page 4-48).
C-130 OFF-EQUIPMENT		
LANDING GEAR		
13522	Steering Control Valve	Look in "Port E" to ensure shaft is centered. (ref: T.O. 4SA3-26-3, para 6, step h)
1342D	Nose Steering Actuator	During re-assembly of nose gear steering actuator, inspect for proper safety wire of lock washer at piston end of rod assembly. (ref: T.O. 9H2-3-12-3, page 4-6, step a **CAUTION**)
FLIGHT CONTROLS		
14131	Repair of Aileron Boost Pack	During assembly of aileron boost actuator, inspect cylinder sleeve for proper installation. (ref: T.O. 9H2-4-102-3, fig 1, index 45-46)
14331	Repair of Rudder Boost Pack	During assembly of rudder boost pack actuator, inspect cylinder liner for proper installation. (ref: T.O. 9H2-4-94-3, fig 7, index 36)

ENGINES/PROPS		
2213A	External Scavenge Pump Assembly	Prior to installation, ensure 2 each preformed packings are installed on pump. (ref: T.O. 2J-T56-56, WP 04500, page 3, para 3.5, step 2)

22400	Turbine Assembly	Prior to installation, inspect compressor 14th stage and rear bearing scavenge area for F.O. Inspect fuel nozzles, oil tubes, and combustion casings for F.O., damage, cracks and proper installation. Ensure 1 each o-ring seal is installed on the oil pressure tube and that 2 each o-rings are installed on oil scavenge tube. (ref: T.O. 2J-T56-56, WP 01900, page 11, para 3.10)
22415	Turbine Bearing Cage, Forward	Prior to installation of combustion chamber inner casing liner, ensure gap position of internal retaining ring is at the top (12 o'clock) position. (ref: T.O. 2J-T56-56, SWP 01904, para 3.6, page 14, item 15)
22432	Second Stage Vane Assembly	Prior to installation of turbine inlet casing, ensure the 12 vane locking keys are installed in the second stage vane assemblies. (ref: T.O. 2J-T56-56, SWP 01904, para 3.2, step v, page 9)
22433	Third Stage Vane Assembly	Prior to installation of vane casing, ensure the turbine vane locking keys (6 ea) are in the slots of the third stage vane assemblies. (ref: T.O. 2J- T56-56, SWP 09104, page 8, para 3.2 step h)
22458	Turbine Rear Bearing Support	Prior to installation of rear bearing cage, ensure small metal o-ring is installed on bearing support flange rear face. Prior to installation of rear bearing oil seal, ensure installation of large gasket on oil seal rear face. Ensure small metal o-ring is installed on rear bearing support flange front face. (ref: T.O. 2J-T56-56, page 4, SWP02003, page 5, para 3.3, step f)
2245B	Tie Bolt Assembly	**1.** Prior to installation of the tie bolt, ensure the o-ring seal is installed on tie bolt and pump adapter alignment pin is intact. (ref: T.O. 2J- T56-56, WP 01900, page 14, para 3.11, step l)
		2. Prior to installation of tie bolt lock nut, ensure that metallic o-ring seal is installed and properly seated in tie bolt. (ref: T.O. 2J-T56-56, WP 01900, para 3.11, page 14, step n)
22460	Turbine Rear Scavenge Pump	Prior to pump installation, ensure the packing is installed with anti-seize on drive shaft, and the metallic o-ring seal is installed on pump support. (ref: T.O. 2J-T56-56, SWP 02003, para 3.4, page 8, steps n and o)

22511	Fuel Pump	Prior to installation, ensure the o-ring seal is installed on drive coupling and the gasket is installed on the accessory housing. (ref: T.O. 2J-T56-56, WP 02200, page 3, para 3.6, steps c and f)
2251E	Fuel Control	Prior to installation, ensure that the hollow pin is intact and 1 each pre-formed packing is installed over pin. Ensure packing is installed over fuel control mounting flange. (ref: T.O. 2J-T56-56, WP 02700, page 6, para 3.6, steps a and b)

22651	Rear Case Inner Diaphragm	Prior to installation of rear case, verify the thirteen nuts that secure the case rear inner diaphragm are torqued to 140 to 180 inch pounds and ensure both tangs of the cotter pins are bent over the nuts. (ref: T.O. 2J-T56-56, SWP 01190, para 3.9, step c, page 8)
22660	Torquemeter Assembly	Prior to mating the power section, ensure the front bearing area is free of F.O. and the oil jet is not damaged. Ensure o-rings are installed on the torquemeter inner shaft on the torquemeter housing prior to mating torquemeter to power section. (ref: T.O. 1C-130B-10, page 3-14, step 4)
22664	Torquemeter Housing Assembly	Prior to installation of torquemeter housing, ensure packing is installed on torquemeter housing front and rear pilot diameters. (ref: T.O. 2J-T56-56, WP 01300, page 7, para 3.5 step a)
22665	Safety Coupling	Prior to installation of torquemeter shaft, ensure outer member retaining nut is secured with key washer tab. (ref: T.O. 2J-T56-56, WP 01300, page 7, para 3.4, step h)
22666	Torquemeter Shaft Assembly	Prior to installation of torquemeter housing, verify final torque (300-350 inch pounds) of torquemeter shaft to safety coupling bolts and ensure lock tabs are bent forward over bolt heads. (ref: T.O. 2J-T56-56, WP 01300, page 7, para 3.4, steps o and p)
22BAL	Torquemeter Shaft Seal	After installation, inspect for F.O. in and around seal area. Ensure shaft seal tongs located at top and bottom of seal are engaged. Check the clearance, maximum allowable is 0.060 inch. (ref: T.O. 1C-130B-10, page 4-4, para 4-10, step r)
32510	Propeller Blade Installation	Prior to installation of the blades into the rear barrel half, ensure the blade seal and retainer are in the proper position. The seal should have the word “bottom” toward the bottom of the blade. Ensure each blade segment gear and micro adjustment ring etch marks are exactly lined up (ref: T.O. 3H1-18-2, para 2-11, page 2-9, step d, page 2-10, see **NOTE** after step m)

32511	Propeller Installation on Engine Shaft	Prior to rear cone installation, ensure gearbox shaft thrust nut lock ring is properly splined and seated. Ensure the corrosion inspection and treatment of the propeller shaft has been accomplished. (ref: T.O. 3H1-18-2, page 2-46 para 2-67, step a and **CAUTION**)
32512	Pitch Lock Regulator and Dome Installation	Prior to installation of dome assembly, ensure the snap ring is installed in PLR externally threaded ring. Ensure all blades are rotated to the feather position with the feather latches locked. Ensure proper shim thickness on the barrel shelf. (ref: para 2-69e, 2-70a, b). **CAUTION:** Do not rotate #1 blade past 100 degrees or –10 degrees. (ref: T.O. 3H1-18-2 page 2-49, para 2-70 and **CAUTION**)

32516	Propeller Retaining Nut	Ensure propeller hub nut is torqued properly. (1900-2200 foot-pounds) (ref: 3H1-18-2, para 2-68, page 2-47, step d)
32525	Valve Housing Installation	Ensure the beta back-up valve control cam of the replacement valve housing is set at the same angle as the removed valve housing. Ensure the removal of the rig pin and meshing of drive gear train. (ref: T.O. 3H1-18-2, page 5-99, para 5-135, step j, page 5-100, **CAUTION**)
32560	Pitch Lock Regulator (PLR) Installation	Prior to installing PLR cam lock ring, ensure pitch lock ratchet ring's pin is aligned with the centerline of the # 2 blade bore. (ref: T.O. 3H1-18-2, page 2-48, para 2-69, step d)
AGE EQUIPMENT		
ADA4C	MHU-83/E Wheel Bearing (Front and Rear)	Prior to installing cap assembly, ensure new lock washer is installed and one tab is bent into tapered nut. (ref: T.O. 35D-3-8-31, para 5-201, page 5-114, 5-114a)
AE14C	MJ-1A/B Rear Wheel Bearing Installation	Prior to installing cap assembly, ensure new lock washer in installed and one tab is bent into tapered nut. (ref: T.O. 35D3-2-25-1, para 3-138, page 3-84 **CAUTION**)
AGEPG	-86 Generator Installation	After torquing coupling screws (fig 7-1, item 3) mark them with white paint to show evidence of slippage. (ref: T.O. 35C2-3-469-2, page 2-12, para 2-9e6)
AGEPG	-86 A & D Generator Installation	Loosen the eight hex head cap screws (5) by two turns. Mark the center top of damper pulley. Rotate engine two full turns, and position mark on damper pulley to bottom. Rotate engine 90 degrees to access remaining four screws and torque to 30 foot-pounds. (40.7Nm). Scribe mark hex head cap screws with white marking paint. (Fig 7-1). (ref: T.O. 35C2-3-469-12, page 2-16, para 2-9e8)

SURVIVAL EQUIPMENT		
LPJ00	9/P Life Preserver	**1.** Verify service life of inflators and batteries. (ref: T.O. 11P10-6-7, WP 04000, page 4, table 1)
		2. (FLU-9P ONLY) Verify **KAPTON** sleeve installed and serviceable. (ref: T.O. 11P10-6-7, WP 050 00, page 11, Table 1)
		3. Inspect the view ports of each inflator to ensure they have not been automatically fired. (ref: T.O. 11P10-6-7, WP 05000, page 9, table 1) Verify the preserver has been properly stenciled (ref: T.O. 14S1-1-102, page 5-71, para 5-19.5g)
		4. Verify safety tie on manual inflation lever. (ref: T.O. 11P10-6-7, WP 07000, page 4, para 7.4)
		5. Verify batteries have proper voltage. (ref: T.O. 11P10-6-7, WP 07000, page 4, para 6.2 [A,B, C,D] FLU-9/P, page 5, para 6-3, [A,B,C], FLU 9/AP

		6. Verify chaffing guards are installed properly. (ref: T.O. 14S-1-102, page 7-91, para 7-41.1F)
PCA00	BA-18M/22	**1.** Check for parachute suspension line continuity. (ref: T.O. 14D3-11-1, page 11-28, para 11-8.1-5)
		2. Ensure riser breakcord tacking, retrieval lanyard tacking, and activation plug lanyard is correctly installed. Ensure proper routing of riser/ pack tab tacking is inside beacon actuation lanyard and it moves freely. Ensure beacon is turned on. (ref: T.O. 14D3-11-1, page 5-127, para 5-16g.1-14)
		3. Verify the reinstallation and service life of time delay cartridge and booster. (ref: T.O. 11P-1-7, WP 040 00, page 5, Table 1 and T.O. 14D2-8-1, page 6-6A and B)
		4. Verify the reinstallation and service life of time delay cartridge. (ref: T.O. 11P-1-7, page, 3-5, table 1)
		5. Check for 1 ¼ inch extension of suspension line in deployment bag locking stow. (ref: T.O. 14 D3-11-1, page 11-35, para 11-9.c.7)
		6. Ensure 18 to 24 inches of suspension lines remain after line stowage is complete. (ref: T.O.14D3-11-1, page 11-39, para 11-9.d.5)
		7. Ensure canopy thong is properly inserted into side flap closing cord loop 1 ¼ inches after tacking is complete. (ref: T.O. 14D3-11-1, page 11-44, para 11-9.g.5-6)

PCF17	MC-4 (Main Parachute)	**1**. Check for parachute suspension line continuity. Insert toggle thong through main finger trapped loops. Insert toggle thong through main finger trapped loops. Barrel nuts are tightened until firmly seated against flange. (ref: T.O. 14D1-2-468-2, page 2-90, para 2018.c.4, page 2-92, para 2-18. d.2, page 2-27, para 2-8.c.4)
		2. Clear stabilizers – four stabilizer panels on right side and two stabilizer panels on left side. (ref: T.O. 4D1-2-468-2, page 2-104, para 2-18.f.12, page 2-105, para 2-18.f.13)
		3. Bring slider to the bottom of canopy, ensuring free movement along suspension lines. (ref: T.O. 14D1-2-468-2, page 2-209, para 2-18.f.23)
		4. Suspension line stows do not exceed 1 inch beyond stowage bands. Stow suspension lines until approximately 12 inches remain (ref: T.O. 14D1-2-468-2, page 2-113, para 2-18.h.1, page 2-115, para 2-18, para 2-18.h.5). Rotation of deployment bag and proper placement of risers into pack. (ref: T.O. 14D1-2-468 -2, page 2-116, para 2-18.i.3)

PCF18	MC-4 (Reserve Parachute)	**1.** Check for parachute suspension line continuity. Barrel nuts are tight until firmly seated against flange. Insert toggle through finger trapped loops. Tack toggle thong to riser with 1 turn double 24/4 thread. (ref: T.O. 14D1-2-468-2, page 2-54, para 2-17.b.3, page 2-27, para 2-8. 4.c, page 2-61, para 2- 17.d.10, page 2-61, para 2-17.d.10)
		2. Clear stabilizers, 3 on each side. Pull up slider stops, 4 distinct line groups. (ref: T.O. 14D1-2 -468-2, page 2-60, para 2-17.d.8, page 2-66, para 2-17d.20)
		3. Ensure high points of nose are exposed. (ref: T.O.14D1-2-468-2, page 2-69, para 2-17.d.27)
		4. Suspension line shows do not exceed 1 ¾ inch beyond stowage ban. Stow suspension lines until approximately 8 inches remain. (ref: T.O. 14D1-2 -468-2, page 2-71, para 2-17.e.2, page 2-73, para 2-17.e.6)
		5. Placement of needle fold no more than 1 inch into reserve locking loop. (ref: T.O. 14D1-2-468-1, page 2-77, para 2-17.f.7)
PCF46	MC-5 (Main Parachute)	**1.** Check for parachute suspension line continuity. Barrel nuts are finger tight plus 1/4 turn. Insert toggle thong through main finger trapped loops (gray). (ref: T.M. 09770A-12 & P/1A, page 3-22, para 3-27.3, page 3-24, para 3-27.5-6, page 3-24, para 3-28.2)
		2. Place slider inside canopy between suspension line groups. (ref: T.M. 09770A-12 & P/1A, page 3-29, para 3-30.9-10)
		3. Suspension line stows do not exceed 1 inch beyond stowage bands. Stow suspension lines until 6 to 8 inches remain. (ref: T.M. 09770A-12 & P/1A, page 3-31, para 3-31.3 **NOTE**, page 3-32, para 3-31.5)
		4. Rotation of deployment bag and proper placement of risers into pack. (ref: T.M. 09770A-12 & P/1A, page 3-32, para 3-31.6)
PCF47	MC-5 (Reserve Parachute)	**1.** Check for parachute suspension line continuity. Barrel nuts are finger tight plus ¼ turn. Insert toggle through reserve (red) finger trapped loops. Tack toggle thong to riser with 1 turn double 24/4 thread. (ref: T.M. 09770A-12 & P1A, page 3-3, para 3-5.1-3, page 3-4, para 3-5. 5-6, page 3-4, para 3-6.2, page 3-5, para 3-6.3)
		2. Clear stabilizers, 3 on each side. Pull up slider-to-slider stops, 4 distinct line groups. (ref: T.M. 0977 0A-12 & P/1A, page 3-7, para 3-7.7, page 3-8, para 3-7.11)
		3. Ensure high points of nose are exposed. (ref: T.M. 09770A-12 & P/1A, page 3-10, para 3-7.19)

		4. Suspension line stows do not exceed 1 inch beyond stowage band. Stow suspension lines until 6 to 8 inches remain. (ref: T.M. 09770A-12 & P/1A, page 3-11, para 3-8.1 **NOTE** page 3-11, para 3-8.5)
		5. Placement of needle fold no more than 1 inch into reserve locking loop. (ref: T.M. 09770A-12 & P/1A, page 3-12, para 3-9.6)
PCH00	Chest Reserve Parachute	**1.** Proper layout and suspension line continuity. Approximately 14 to 16 inches of lines left unstowed. (ref: T.O. 14D1-2-396, page 6-19, para 6-72.d)
PCT00	ACES II Parachute	**1.** Ensure new lock-loop is installed prior to packing chute. (ref: T.O. 14D3-10-1, page 3-14, para 3-14, step 8 a and b)
		2. Pull or clear pilot chute shroud from pilot chute spring coils. (ref: T.O. 14D3-10-1, page 3-16, para 3-14, step 9g)
		3. Make certain suspension lines are in proper numerical sequence from skirt to connector links. (ref: T.O. 14D3-10-1, page 3-8, para 3-14, step 2f)
		4. Verify reefing line cutter service life, verify data against AFTO Forms 391 and 392. (ref: T.O. 11P12-15-7, page 2, para 4-1, Table 1) Ensure proper installation of reefing line cutter. (ref: T.O. 14D3-10-1, page 3-14, para 5, step A-F)
		5. Suspension lines should not extend more than 0.75 inch beyond top edge of tunnels (flutes). Lines at bottom shall not extend more than 1.0 inch below edge of flute. (ref: T.O. 14D3-10-1, page 3-26.1, para 3-14, step 13.l)
		6. Stow all but last 18 to 22 inches of suspension lines in tunnels. Use blue marks on lines as a guide. (ref: T.O. 14D3-10-1, page 3-26.1, para 3-14, step 13m)
PCU00	ACES II Drogue Parachute	**1.** Ensure riser legs are not twisted with canopy data panel down against table surface. (ref: T.O. 14D1-3-316, page 3-8.3, para 3-11.2
		2. Ensure riser arms are not twisted. (ref: T.O. 14D1-3-316, page 3-8.3, para 3-11.10
		3. Ensure the seat structure loop is routed under the retaining flap, up through the grommet. Install retaining flap over drogue canopy by inserting the seat structure loop through the grommet on the flap. Lock flap with lock-tab towline. Verify towline lock-tab is routed through structure loop on top side of flap. (ref: T.O. 14D3-3-316, page 3-9, para 3-11.14)
		4. Ensure lock-tab to retaining flap is safety tied with 24/4 cord one turn doubled. (ref: T.O. 14D1-3-316, page 3-9, para 3-11.15)

		5. Ensure proper routing of tie line through static line loop. Ensure shaft of disconnect cord pin is through tie-line loop, entrapping static line loop, before inserting into keeper. (ref: T.O. 14D1-3-316, page 3-9, para 3-11.20.a-b)
		6. Ensure disconnect cord pin is safety tied to keeper with 2/24 cord one turn doubled. (ref: T.O. 14D1-3-316, page 3-10, para 3-11.23)
		7. Ensure sleeve is pulled up over disconnect cord pin rigging. Safety tie should be 2/24 cord one turn doubled between disconnect cord and static line. (ref: T.O. 14D1-3-316, page 3-10, para 3-11.24)
PCF01	MC1-1C Troop Main	**1.** Check sliders for cracks and proper installation. (ref: MAM-SBCCOM-SSC03-01, para 3, item 3, and T.O. 14D1-2-466-2, WP 0006 00-4, Table 1, item 3)
		2. Check canopy for proper layout and lines for proper continuity. (ref: T.O. 14D1-2-466-2, WP 001100-7 thru WP 001100-14)
		3. Check for a clear air channel. (ref: MAM-SBCCOM-SSC03-01, WP 0011-26, step 20-21). Ensure canopy is attached at the bridal loop to the deployment bag. (ref: T.O. 14D1-2-466-2, WP 001100-29, step 1-6)
		4. Check first regular stow for proper twist and placement. (ref: T.O. 14D1-2-466-2, WP001100-39, step 10 and 11)
		5. Ensure connector links are tied and control lines are to the inside. (ref: T.O. 14D1-2-466-2, WP001100-40, step 1-5)
		6. Ensure proper routing of 80 lb pack closing cord, paying close attention to static line pack opening; 2 inch diameter opening between pack loops and position of cord tie off. (ref: T.O. 14D1-2-466-2, WP 001100-45, step 5-8)
PCH00	MIRPS Reserve	**1.** Proper layout and suspension line continuity. (ref: T.O. 14D1-2-462-2, WP 0013 00-5, step 5
		2. Check for clear air channel. (ref: T.O.14D1-2-462-2, WP 0013 00-11, step 18)
		3. Approximately 14 to 16 inches of lines left unstowed. (ref: T.O. 14D1-2-462-2, WP 0013 00-14, step 4)
		4. Ensure suspension lines are stowed in free bag deployment pouch. (ref: T.O. 14D1-2-462-2, WP 0013 00-15, step 6)
		5. Ensure proper positioning of curved pins and pull cords are removed. (ref: T.O. 14D1-2-462-2, WP 0013 00-18 thru 0013 00-19, para 9 thru 11)
		6. Placement of folded pilot chute on top of ejector spring. (ref: T.O. 14D1-2-462-2, WP 0013 00-24, step 1 thru 8)

		7. Ensure removal of all packing aids. (ref: T.O. 14D1-2-462-2, WP 0013 00-24, step 9)

743D AIRCRAFT MAINTENANCE SQUADRON		
C-141 ON-EQUIPMENT		
WUC	**Nomenclature**	**Specific Task**
23HOO	Engine Fuel System	When de-preserving the engine fuel system, motor engine IAW T.O. 1C-141B-2-70JG-00-1, until approximately 3 gallons of fuel drain into container. While motoring, inspect tubes and hoses for fuel and oil leaks. (ref: T.O.1C-141B-2-70JG-00-2, 2-4-2, page 2-32, step a and **NOTE**)
23HAK	Fuel Control	Prior to installing fuel control, clean and inspect fuel control spline and inspect gearbox oil seal. (ref: T.O. 1C-141B-2-73JG-00-1, 3-1-3, page 3-20, step 1 a-e)
23LSD	Bleed Air Manifold, Left/ Right	When installing left or right bleed air manifold, install check valve and toruseal in upper end of manifold. Ensure check valve flow arrow points upward (if no flow arrow, ensure flaps open toward collector Y duct) and closes freely. (ref: T.O. 1C-141B-2-75JG-00-1, 4-6-2, step a, b)
41DCA	#1 Wing Leading Edge (IWLES)	Prior to installation of #1 leading edge, install 45.0 to 125.0) exhaust duct and coupling between pressure regulator valve and leading edge. Torque coupling IAW T.O. 1C-141B-2-21JG-00-1, 2-1-1, page 1-2. (ref: T.O. 1C-141B-2-51JG-00-1, 4-5-3, page 4-96, step a)
41EBH	#3 Wing Leading Edge (IWLES264.30 to OWLES 23.93)	Prior to installation of #3 leading edge, connect ends of ducts, and install coupling. Torque coupling IAW T.O. 1C-141B-2-21JG-00-1, 2-1-1 page 1-2. (ref: T.O. 1C-141B-2-51JG-00-1, 4-5-3, page 4-90, step e)
41EBH	#4 Wing Leading Edge (OWLES 68.93 to 238.93)	Prior to installation of #4 leading edge, connect ends of ducts, and install coupling. Torque coupling IAW T.O. 1C-141B-2-21JG-00-1, 2-1-1 page 1-2. (ref: T.O. 1C-141B-2-51JG-00-1, 4-5-3, page 4-90, step e)
41EBH	#5 Wing Leading Edge (OWLES 238.93 to 410.93)	Prior to installation of #5 leading edge, connect duct and install couplings IAW T.O. 1C-141B-221JG-00-1, 2-1-1, page 1-2. (ref: T.O. 1C-141B-2-51JG-00-1, 4-5-3, page 4-92, step e)
41EBH	#6 Wing Leading Edge (OWLES 410.93 to 584.143)	Prior to installation of #6 leading edge, connect duct and install couplings IAW T.O. 1C-141B-21G-00-1, 2-1-1, page 1-2. (ref: T.O. 1C-141B-2-51JG-00-1, 4-5-3, page 4-92, step e)

743D AIRCRAFT MAINTENANCE SQUADRON
C-5 ON-EQUIPMENT

WUC	Narrative	Specific Task
41VDG	Pilot/Copilot Side Windshield	Prior to installation of windshield, ensure electrical tape used matches the resistance code. (ref: 1C-5A-2-2, para 2-71, step k)
41VDH	Pilot/Copilot Main Windshield	Prior to installation of windshield, ensure electrical tape used matches the resistance code. (ref: 1C-5A-2-2, para 2-68, step t)
41VDJ	Center Windshield	Prior to installation of windshield, ensure electrical tape used matches the resistance code. (ref: 1C-5A-2-2, para 2-64, step s)
45AEA	Engine Driven Hydraulic Pump	Engine Hydraulic Pump Installation. Prior to pump installation, ensure o-ring is installed on spline shaft. (ref: T.O. 1C-5A-2-9, page 2-94, **CAUTION**, and step a)
97AAC	Fire Extinguisher Squib (FE 1301)	Prior to installation of fire extinguisher squib, check electrical connections for F.O. damage and remove shorting cap. (ref: T.O. 1C-5A-2-13, page12-213, para 12-210, prior to step c)